



**Information Governance
Individual Voter Registration Subgroup**

Status Report

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INDIVIDUAL VOTER REGISTRATION - LESSONS FROM OVERSEAS

INTRODUCTION

In February 2010, former Director of EURIM Philip Dunne MP, supported by Nick Palmer (then a backbench Labour Party MP), invited EURIM to look at the feasibility of electronic individual voter registration (IVR) in the UK compared with best practice elsewhere.

In response, a subgroup of EURIM's Information Governance Group undertook a study of electoral registration systems overseas to determine if they contained lessons for the United Kingdom, particularly with a view to understanding other countries' use of technology and approaches towards the two main measures of an electoral register: completeness and accuracy. It should therefore be noted that this report focuses on the registration systems operating in other countries and does not seek to look closely or comment on the current system in the UK. Comment by EURIM on the UK's current approach to registration can be found at: http://www.eurim.org.uk/activities/ig/1103-IVR_LessonsFromOverseas_Summary.pdf.

The main political parties and the Electoral Commission fully supported the introduction of IVR as provided for in the Political Parties and Elections Act (2009), to ensure greater accuracy and completeness of electoral registers, to enable greater citizen confidence and to minimise scope for fraud.

The Coalition Government indicated that it would speed up the process of changing to IVR, and on 15th September 2010, the Minister for Political and Constitutional Reform issued a statement on the planned implementation of IVR in Great Britain. This included data-matching trials by volunteer local authorities during 2011, in which the electoral register would be compared with other public databases in order to improve accuracy and to find people who are eligible to vote but who are missing from the register.

We welcome the work of the present and last governments in aiming for an improvement in the accuracy and completeness of the electoral rolls in the UK because, if successful, new measures will both reduce the possibility of fraudulent registration and ensure that the maximum number of voters are registered to vote at elections. Accuracy refers to the registration being that of a true identity exercising a legitimate right to vote. Completeness refers to the register having on it the maximum number of eligible people in the district. Data matching can assist both but directly affects only completeness.

The Electoral Commission will be required to play a key role in assessing and reporting on the pilots, which are intended to demonstrate which sources are most effective in data-matching, and which are most useful in improving the accuracy and completeness of the electoral register. If successful, they will be rolled out more widely across local authorities on a permanent basis to help ensure that the register is as complete as possible.

SCOPE OF STUDY

The study is focused strictly on the issue of the mechanics of electoral registration and specifically how that is done overseas. It recognises that any system should ensure that all personal data is properly managed and protected, and that any recommendations on electoral registration must be practical, conducive to improvements in registration levels and accuracy, and consistent with UK political tradition and culture. The terms of reference excluded electronic voting and the organisation and logistics of polling.

The approach comprises three stages:

1. To survey voter registration circumstances, procedures and mechanisms used by a number of other countries, together with the lessons learned from their experience that may be relevant to the UK situation.
2. To analyse and categorise the survey results in a way that highlights not only the main characteristics but also those that might be most suitable for the UK.
3. To describe a small set of options for the way ahead, tailored to support whatever political and practical priorities for voting may emerge.

EURIM's main focus is:

- the technical means of **holding and transferring personal data** between different authorities,
- how to **transfer that data securely**,
- how to **store that data in a way consistent with privacy requirements**,
- how current or emerging technology might help facilitate:
 - i. access to the electoral register;
 - ii. the process of applying to be registered;
 - iii. updating information (e.g. change of address);
 - iv. ensuring information held by an Electoral Registration Officer (ERO) is accurate.

THE SURVEYS

First Survey

For the first survey, we identified and approached 22 countries, some with very different cultures and approaches to governance, representing well in excess of 1 in 10 of the countries recognised by the United Nations. Countries were chosen in some cases because of the historical and legal cultures they share with the UK (e.g. Australia, Canada, New Zealand) or because of their adoption of a centralised population register, which is used to generate an electoral register (as in the Scandinavian states).

Other countries were included because their populations are, like that of the UK, large (Germany, Japan). Another group includes those which, like the UK, are in a state of transition, upgrading or changing the entire basis of their electoral register (India, Malta, Ireland). 9 out of the 22 countries responded directly. Information on a further 6 countries was available from industry contacts. A full list of countries approached, questions posed and responses received can be found in the summary grid at: http://www.eurim.org.uk/activities/ig/idg/eVR_GridOverseas.pdf.

We were keen to have input from India and Japan, but unfortunately we were unable to obtain responses from either. India interestingly, is moving away from electoral registers held at regional level to a single national electoral register and this move, together with India's recognised software

capability would make it an interesting study. At the end of the first survey, it was apparent that there are essentially two approaches to electoral registration:

- A. Create a stand-alone electoral register.
- B. Create a 'standing' population or residency register which will then generate an electoral register for each new election.

Second Survey

The decision of the UK Coalition Government to scrap plans for a National Identity Card and the National Identity Register rules out its adoption of a solution based on a population register, however efficient that might be in terms of achieving completion and accuracy (see below). Nevertheless, it is clear that those countries using population registers have developed sophisticated and secure means of holding and handling the personal data of citizens, and enabling them to check or amend their personal data online. The subgroup considers that the high standards of operational practice adopted contain useful lessons for the United Kingdom, and we therefore engaged with a smaller sample group from amongst those countries taking part in the first survey that had particularly well-developed systems in terms of security and procedure. The sample countries for the second survey, highlighted in green in the table at section 1 below, were:

Canada	Finland
Denmark	Germany
Estonia	Netherlands

The Australian Electoral Commission, which participated in the first survey, was unable to participate in the second survey, which is unfortunate, as it would have provided information on a second country with common law traditions. Information included on Australia therefore is based either on responses to the first survey or has been gathered from the Internet.

Other countries with well developed systems in place but with population registers (e.g. Sweden and Norway), were omitted from the second survey because we already had sufficient information on population register countries.

PURPOSE OF THE ELECTORAL REGISTER

The efficiency of the electoral roll is judged on the basis of two qualities:

- A. Accuracy: to ensure that there are no false entries. Also that the elector casting his vote is indeed entitled to vote and that no fraudulent vote is cast by post or proxy, for instance in the name of an individual who is not resident at the quoted address, or does not even exist.
- B. Completeness: every person who is entitled to have an entry in an electoral register is registered. The register must provide the fullest possible list of people who are entitled to vote. The value of a 100% complete electoral roll in the UK would be to ensure that all who are entitled to vote are able to vote as well as to prove the level of turnout or to provide data for political parties and polling experts to plan their campaigns or surveys respectively.

In the UK, various studies and practical experience in elections at national and local level have drawn attention to poor registration levels amongst some demographic groups, for example, students in inner city areas. Media investigations have also pointed towards examples of fraudulent voting based on postal and proxy vote options.

How do other countries address the issue of 'lost voters' (i.e. the completeness of the register) and proof of entitlement to vote (the accuracy issue)?

FINDINGS

1. Two distinct trends are discernible in the responses from overseas, between those countries which treat the electoral register almost exclusively for electoral purposes and those that create a multi-purpose population register, either at national or municipal level. The former might be classed as a 'Commonwealth' or 'common law' heritage, the latter a 'continental' heritage.
2. All the sample countries have taken steps to **improve and modernise** their electoral registration system over the years, for instance by putting in place agreements for data matching with other government departments, or implementing secure online registration options.
3. Countries operating a population register system where the citizen is required by law to update their information maintain that their system leads to **virtually complete and accurate electoral rolls**. (Section 2 below).
4. **Compulsory registration on an electoral register** as with the Australian example may still leave large numbers of voters unregistered. (Sections 2 and 11).
5. Whether common law countries, operating a pure electoral register, or continental countries, operating a population register, **all the sample countries require proof of identity to register the voter**. In this respect, the UK is the odd one out. (Section 6).
6. There is a trend to offer the elector various means of amending their residency details, including in most cases, **online amendment**. (Section 7).
7. Where online amendment (or online access to check residency details) is available, access is, in all but one case, **secured by means of digital signatures** (Section 8).
8. Citizens of the sample countries can request that their **details remain on the electoral roll or population register (for electoral purposes) when living overseas**. (Section 9).
9. Although they do not operate online data matching, the Australian and Canadian electoral authorities have **formalised agreements for data sharing** with other public bodies. (Section 10).
10. Authorities in countries which operate a population register and which do data matching, or transfer data with other public bodies, do so by means of **secured systems** (secure networks, secure socket layer or encrypted data packets) (Section 10).
11. It is **difficult to draw any firm conclusions on registration rates**: the high level of registration in countries operating population registers is of limited relevance as the UK has cancelled plans for a compulsory Identity register. The Australian Electoral Commission, despite operating a compulsory electoral registration system with data sharing agreements, has concluded that only 91% of the electorate is registered. (Section 11).
12. On the subject of capturing **lost electors**, there are two possible approaches: one where the government seeks out eligible electors believed not to have registered (e.g. Canada); the other, where citizens are motivated to maintain their details on the municipal population register (i.e. the electoral register for the purposes of this exercise) because the same municipal authorities also issue passports and supply social services (e.g. Netherlands). (Section 12).
13. Unsurprisingly, all sample countries ensure that their electoral/population register processes **adhere to national and/or EU privacy regulations**. (Section 13).
14. On information assurance, just two of the sample countries ensure that their registration systems are **ISO 27001 compliant**. It is possible that others aim for ISO 27001 compliance, but this is not confirmed. (Section 13).
15. Only 3 out of 7 sample countries require the voter **to prove identity at the polling station**, although all require some form of proof of identity for registration. This may leave open the possibility of fraudulent voting by means of personation, where an individual is legitimately registered, but his or her vote is cast by an impostor. (Section 14).

1. STAND ALONE ELECTORAL REGISTERS AND POPULATION REGISTERS.

As mentioned above, two distinct trends are discernible from the responses, between those countries which treat the electoral register almost exclusively for electoral purposes (e.g. Australia, Canada, New Zealand, India, Ireland, and interestingly Spain), and those (particularly evident in Northern Europe) where the electoral register or registers are created afresh for each new election out of an existing population or residency register (either at national or municipal level), that is multi-purpose. The former might be classed as a 'Commonwealth' heritage, and the latter a 'continental' heritage.

Countries adopting this second approach in turn are divided into those who operate a single central population register on a national level and those who operate the population or residency registers on a local or municipal level.

Various features of the different systems are summarised in the tables below.

Stand-alone Electoral Register	Population Register	
	National	Municipal
Australia	Chile	Germany
Canada	Denmark	Netherlands
India	Estonia	Japan
Ireland	Finland	
New Zealand	Malta	
Guyana	Norway	
Spain	Senegal	
	Sweden	

2. COMPULSORY REGISTRATION

Compulsory voting leads to high levels of turnout.

Compulsory registration should lead to high registration rates. But, in Australia, where registration has been compulsory since 1911, a 2008-9 report on the electoral roll suggests that the registration rate is now in the region of 91% of electors. (See Section 11, below) Compulsory registration, even if it were under consideration in the UK, therefore may not be the answer to the challenge of achieving the highest possible registration rates.

In all the sample countries where a population register operates, it is mandatory for citizens to register their residence with the local authorities. As the electoral register is generated by the population register, this has the effect of making electoral registration mandatory.

Q: Is it mandatory for the elector to register either with the electoral authorities or with the authorities maintaining the population registers?		
	Electoral Roll	Population Register
Australia	√	
Canada	Not Mandatory	
Denmark		√
Estonia		√
Finland		√
Germany		√
Netherlands		√

3. ROUTES TO REGISTRATION

In the United Kingdom, the electoral authorities continue to update the electoral register by means of the annual canvas although the Political Parties and Elections Act 2009 provides for data matching pilots and the new coalition government is proceeding with this plan.

In countries with a population register, the citizen is required to inform the authorities maintaining the register of a change of address once. In Australia and Canada, the voter registers directly with the electoral authorities.

Q: How is the voter registered for elections?		
	By informing the electoral registration authorities	Automatically through the Population Register
Australia	√	
Canada	√	
Denmark		√
Estonia		√
Finland		√
Germany		√
Netherlands		√

4. IS THE CITIZEN REQUIRED BY LAW TO KEEP THEIR DATA UP-TO-DATE?

In countries with a population register, it is mandatory for citizens to keep their data up-to-date by reporting a change of address to the authority which maintains the register.

Registration is not mandatory in Canada, but persons wishing to vote must register themselves either through the National Electoral Register or, alternatively, at the polling station.

Q: Once registered, is it mandatory for the elector to keep the relevant authorities informed of changes of address?		
	On the Electoral Roll	On the Population Register
Australia	√	
Canada	Not mandatory	
Denmark		√
Estonia		√
Finland		√
Germany		√
Netherlands		√

5. DATA REQUIRED FOR ELECTORAL REGISTRATION

The data required below is specifically required for electoral registration. It does not therefore necessarily represent the entire set of data required for registration on the population register in the North European countries which operate that system.

What data is required for electoral registration?									
	Name	Address	Age/ DOB	Sex	Nationality	Years of Residence	Eligibility to Vote	Personal ID Code	Voting district
Australia	√	√	√	√	√				
Canada	√	√ (civic address & mailing address)	√	√					
Denmark	√	√ (including previous addresses)	√	√	√		√	√	
Estonia	√	√	√		√		√	√	
Finland	√	Not for register of electors, but is included in breeder database.	√ (part of ID Code)		√			√	√
Germany									
In Germany	√	√	√						
Overseas	√ (and/or maiden name)	√ (current and last address in Germany)	√		ID card or passport details	√	√ Personal affidavit of eligibility		
Netherlands	√	√	√	√	√	√	√		

6. EVIDENCE OF IDENTITY

The question of proof of identity is in the UK a controversial issue. It is not an issue in the Northern European states where proof of identity is necessary to establish oneself on the population register, or at least to register a change of address.

It is interesting to note that both Australia and Canada, sharing common law traditions with the United Kingdom, also require proof of identity for the citizen to be registered on the electoral role. It is not, therefore, written in tablets of stone that electors in a common law country should not be required to prove identity, but this does appear to be an issue specific to the UK. To address this issue, the government plans to match (i.e. confirm) data relating to the address and perhaps other details of a voter with other national databases, rather than ask the elector to prove his own identity.

Q: Does a new registrant have to prove identity by presenting documentation?		
	On the Electoral Roll	On the Population Register
Australia	<ul style="list-style-type: none"> √ either by - providing driver licence details when submitting registration forms online. - or by submitting one of 16 acceptable documents (passport, birth certificate, certificate of citizenship etc), signed by an authorised witness. - or by having two people already enrolled as voters confirm the individual's identity. 	
Canada	<ul style="list-style-type: none"> √ - identification with photo, name and address issued by a government agency, or - two original pieces of authorised identification, one with the name and the other with the name and the address, or - swear an oath and have an elector who knows the person vouch for him/her. The elector must have authorised identification and his/her name must appear on the list of electors in the same polling division as the person asking to be registered. 	
Denmark		√ (passport)
Estonia		√ (some form of identity document)
Finland		√ (passport or ID card for EU nationals)
Germany		√ (Germans: ID Card; Non-Germans: ID card, passport, visa, proof of address)
Netherlands		√ (passport ID card or birth certificate)

7. AMENDING PERSONAL DETAILS

Sample countries have, to a greater or lesser extent, tried to build flexibility into the procedure for amending or updating personal details.

Q: How does the registrant amend personal details for electoral purposes (i.e., change of address)?					
Country	Online	Hard Copy	Telephone	E-mail	In person At an office
Australia	√ (but must be backed up by a signed hard copy of the 'smart form')	√			
Canada		√ (post or fax)			√ (including during the electoral process)
Denmark	√ with digital signature	√			
Estonia	√ with digital signature via ID card or mobile ID applications	√ (post)		√	√
Finland	√	√	√		√
Germany: For Postal Voting (but must already be on the electoral register to apply)	√ (in some cities)	√		√	√
Netherlands	The citizen may not amend his or her own details, but can check them online and request amendments by the authorities online.				√

8. SECURE ACCESS ONLINE

There is at present no arrangement for citizens in the UK or Canada to register online. It is difficult to imagine this situation holding into the long term, as future generations become increasingly IT-centric in the way that they manage their lives. Neither is online registration the norm in Germany, although it is available in some municipalities. In Australia, online registration is possible, but must be accompanied by a signed hard copy because Australian Electoral Commission has apparently not yet adopted digital signatures to support a fully online registration system.

The lesson to be learnt from most continental countries, however, is that they have introduced secure procedures governing online access. Where the elector actively amends, or passively checks his or her details, online, they may only access the data by means of a digital signature.

In general, as the population increasingly uses e-government systems to file tax returns or order a new driving licence, there will be a natural move towards online registration in the UK.

Q: If amendments to personal data are made online, or personal data is accessed online, what security methods are employed?	
Australia	The 2001 AEC review of the electoral act recommended consideration of the use of digital signatures, but it is not clear to us if this has now been implemented. Judging by the current AEC web page for amending an elector's details online, it appears that digital signatures have not yet been introduced, so that a voter must continue to print out a hard copy of the 'smart form', sign it and send it to the AEC.
Canada	There is no online registration.
Denmark	Amendments to address online are made by using a digital signature.
Estonia	Amendments to address are made securely online by using a digital signature via ID card or Mobile ID applications.
Finland	<ol style="list-style-type: none"> 1. Digital signature via the ID card, or 2. Online password as developed for online banking, or 3. User ID and Password as developed by Finnish Post corporation.
Germany	Information held by the Association of German Cities which we have been unable to contact.
Netherlands	<p>A DIGID (digital ID) is allocated to the citizen as proof of identity to enable them to access, but not amend, personal data online.</p> <p>The citizen applies for the DIGID by quoting his or her Unique Citizens ID code. The DIGID currently offers two layers of security :</p> <ol style="list-style-type: none"> 1. Username and password (to consult data). 2. One-time transaction code via text message, and 3. Card with digital signature (in preparation).

9. REGISTRATION OF EXPATRIATES

With the exception of the Netherlands, our sample countries have a facility for recording expatriate electors on an electoral register, whether that is a relatively limited group of electors (as in Denmark), or a wide group that includes all citizens based overseas (Canada and Estonia).

Consistent with the general approach of the sample group countries, the expatriate may be recorded on a central, national electoral register or on the elector's last municipal register.

Q: Does the elector remain on the roll or database when he or she leaves the country for an extended period?	
Australia	A voter living overseas may request enrolment on the register 3 months before departure or up to 3 years after departure.
Canada	Elections Canada has an International Register of Electors, which is a permanent, computerised list of Canadians who are temporarily travelling or residing outside the country and who are eligible to vote in federal events.
Denmark	Citizens must inform the municipality when they are preparing to leave the country. Certain citizens living overseas (Diplomats, representatives of Danish Companies, students, people intending to return to Denmark within 2 years) may retain their right to remain on the electoral register by applying to the electoral board.
Estonia	Estonian citizens permanently or temporarily based abroad have the right to vote abroad. For national (Riigikogu) elections, the voter must determine their previous place of residence in Estonia, or that of their parents. If the voter is planning to exercise a postal vote whilst overseas, they must apply to the local Estonian Embassy to do so and must at the same time present a copy of an identity document. The voter's overseas address will be entered in the Estonian Population register.
Finland	Records of Finnish expatriate citizens are held in the population register and they will be included in the voter register automatically. If they have provided the authorities with their current addresses, they will receive a notification about having the right to vote in (relevant) Finnish elections. Finnish citizens abroad are provided with polling stations in Finnish embassies and some other suitable locations around the world.
Germany	Germans living abroad can apply to be entered into the voters' register of their last home municipality and may cast their vote by postal voting.
Netherlands	There is no centralised registration of all Dutch nationals in other countries by the government. Dutch Citizens overseas will not automatically receive a voting card. While living abroad these voters have to register themselves, e.g. at the municipality of The Hague. They have to register for each election separately and are requested each time they register to provide proof of identity (and thus eligibility to vote) by sending along a copy of their passport.

10. DATA MATCHING

The Political Parties and Elections Act 2009 makes provision for pilot schemes of data matching between local electoral registers and other national databases. The coalition government is proceeding with this proposal and data matching pilots are now actively being discussed.

The sample group showed varying attitudes towards data matching:

Whilst Australia and Canada do not conduct online data matching, they do have a formal set of agreements with data suppliers. Denmark and the Netherlands do not 'data match', but Estonia and Finland do and Germany has a restricted data matching facility.

The possibility of data matching with private sector organisations was mentioned very belatedly during our study – indeed at a point when just about all responses had been received from overseas. There is therefore little comment in this report on data matching with the private sector, but the Government minister responsible has stated that this approach is being considered, as the government wants the data matching pilots to use a wide variety of sources. However, issues relating to liability, insurance, data protection and freedom of information are likely to add complications.

Q: Is data matched between the Electoral Register and other databases?	
Australia	There is NO online data matching, but the Australian Electoral Commission (AEC) does receive information from other bodies, including state and territory electoral bodies under Memorandum of Understanding (MOU). Information is also checked with the immigration department (to confirm citizenship) and with transport authorities to check driver licence details.
Canada	There is NO online data matching. But, Elections Canada has signed agreements with data suppliers, including the Canada Revenue Agency, Canada Post Corporation, Citizenship and Immigration Canada, provincial and territorial registrars of motor vehicles and vital statistics, and provincial electoral agencies with permanent voters' lists. Lists of electors from provincial and territorial elections are also used to update the Register. The information is sent to Elections Canada on password protected CDs or DVDs and on some occasions in paper-format (from small or remote organisations). Other files are provided to us by File Protocol Transfer (FPT). All information (except paper) is encrypted.
Denmark	There is no data matching with other databases – the electoral roll is simply an extract from the population register.
Estonia	Data is matched with other databases using a data exchange layer called x-road. See: http://www.ria.ee/indexphpid27309 .
Finland	Batch data transfer to relevant government agencies from the population register via secure networks. Citizens are identified by unique personal ID code for data matching purposes.
Germany	<i>'..Other authorities can request certain (items of) information by the Registration Offices, provided this information is necessary to perform their tasks. The information may also be transferred online via internet by means of encrypted data.'</i>
Netherlands	There is no data matching with other databases – the electoral roll is simply an extract from the population register, but all government users of population register data are required to inform the municipality of any reasonable doubts about the data provided by the population register. All online traffic is via secure socket layer (SSL).

11. REGISTRATION RATES

It is hardly surprising that the countries which operate mandatory registration of citizens on a population register or registers (where the electoral register is generated *ad hoc* from the breeder database) are confident that this enables them to achieve near 100% registration.

As the adoption of a mandatory national identity register by the United Kingdom is ruled out for the foreseeable future, this particular set of responses cannot be said to hold key lessons for the UK at present.

However, it is interesting to consider the Canadian estimated registration rates against the backdrop of Canada's well developed data sharing arrangements. If Canada's comprehensive data sharing arrangements cannot yield more than 94% of total registration, with only 83% of the electors being recorded (accurately) at the correct address, we might wonder why or whether the UK's data matching would yield better results. If broadly similar registration rates were achieved in the UK using data matching, we might expect registration of 94% of our electorate of 45 million – i.e. 42,300,000, leaving 2.7 million electors still unregistered.

Even Australia, where registration is compulsory, estimated the registration rate in 2005 (See below) to be only 96.3%, although the AEC report on the electoral roll of 2008-09 now suggests the registration rate may be as low as 91%. Given an estimated electorate in the UK of 45 million and applying the (more positive) success rate of 96.3% registration, the well developed Australian combination of compulsory registration, proof of identity and formalised data exchange arrangements with other government departments might still result in a shortfall of 1.65 million unregistered electors in the UK.

As noted above, even the introduction of compulsory registration (as in Australia) may not achieve a 100% registration rate.

Data matching pilots are nevertheless to be welcomed as a step forward, although realistically we should not expect the major breakthrough of 100% registration and only trial and error may point towards the optimum combination of data sources for matching purposes.

Q: Is there any evidence of rise or decline in registration rates as a result of using current systems?	
Australia	<p>The AEC's Sample Audit Fieldwork (SAF) report of 2005 suggests that the electoral roll is 96.3% complete and 91% accurate, representing a 1% and 1.5% improvement respectively on the 2004 audit fieldwork report. However, the AEC report goes on to comment '<i>Although these results are pleasing, it is too early to identify any trends towards more complete and accurate electoral rolls, with many results differing only slightly from those last year.</i>'</p> <p>But, the AEC report of 2008-09 states: '<i>At 30 June 2009, 13 892 562 electors were enrolled to vote, which is an estimated voter participation rate of 91.9 per cent. The number enrolled at 30 June 2009 was an increase of 0.9 per cent from the 13 762 570 electors enrolled at 30 June 2008.</i></p> <p><i>While the number of electors on the roll continues to increase, the Australian population is growing at a faster rate than the electoral roll. As a consequence, the overall participation rate has declined.</i>'</p>
Canada	<p>Elections Canada states that: '<i>Sharing voters' lists with provincial, territorial and municipal electoral agencies reduces duplication, results in higher quality lists of electors, and creates savings for taxpayers. As of 2009, the National Register of Electors of Canada includes 94% of all electors; 83% of all electors are registered at the correct address.</i>'</p>
Denmark	It is assumed that virtually all who are entitled to vote are registered via the population register.
Estonia	Every entitled voter who is recorded in the population register will automatically be registered to vote. The Estonian authorities believe that nearly 99% of the population is recorded in the population register.
Finland	Finnish authorities are convinced that they ' <i>are close to absolute 100% coverage</i> '. They ' <i>are quite sure that no person who is a Finnish citizen and is a permanent resident of Finland is omitted from the register of voters</i> '. (No complaints about lost voters in national parliamentary / presidential elections are received).
Germany	<i>"Nearly all persons eligible to vote are entered in the voters' register ex officio."</i>
Netherlands	<i>"There is no evidence of electoral registration declining. The system used in the Netherlands is basically a "catch-all" of people living in the Netherlands. Therefore, registration levels are not declining or increasing, besides the natural flow of population due to coming-of-age and deaths. Apart from homeless, vagrants (who often have a so called letterbox address), illegal immigrants"</i>

12. HOW DOES THE SYSTEM COPE WITH 'LOST' ELECTORS?

For some of the countries operating a population register this is a non-question as they are firmly of the view that their system captures residential data of virtually all citizens. As the Netherlands explained, it is in the citizen's interest to ensure his or her registration details are fully up-to-date at municipal authorities, because those same authorities are responsible for issuing passports and social benefits.

The Canadian approach recognises a need to go out and target those demographic groups which traditionally have poor registration rates (i.e. students).

Drawing on these approaches then, the UK may be able to increase registration rates by linking electoral registration to registration for other public benefits and combining that longer term process with an initial campaign to reach out to the groups which are not well represented on the electoral rolls.

Q: How does the system cope with "lost electors"?	
Australia	We were unable to find clear information from AEC websites on this point.
Canada	<p>Elections Canada targets demographics known to be less likely to register, such as youths and students. Throughout the year, registration kits (which contain a form addressed individually to each youth and a prepaid return envelope) are sent to newly identified electors, including those who turned 18 since the last general election. Recipients are asked to confirm their citizenship and to give their consent to be added to the Register of Electors. To those who are still not registered, a "Leave your mark" reminder card is sent at the outset of the general election (406,000 potential new electors received the "Leave your Mark" card during the 2008 General Election).</p> <p>During an election, targeted revision is conducted (or revision desks set up) in student residences on campus and in student neighbourhoods. Revision desks were set up in post-secondary institutions in 20 electoral districts across the country for the 2008 General Election.</p> <p>Email bulletins are also sent to youths and students, special needs electors, ethnocultural and aboriginal organisations during elections.</p> <p>For homeless people, proof of identity can be an official document bearing the elector's name. For identity and residence, the attestation of residence by the administrator of a local shelter is acceptable, if the shelter has provided food, lodging or other social services to the elector. In order to register and vote, the elector will also be required to provide a second document authorised by the Chief Electoral Officer showing the name of the elector. Without such proof, a person who is homeless can register on election day as long as another voter who is registered in the same electoral district, and who provides satisfactory proof of identity and residence, can vouch for that person.</p>
Denmark	The compulsory population register captures the data of virtually all eligible electors.
Estonia	Ditto
Finland	Ditto
Germany	<i>'Nearly all persons eligible to vote are entered in the voters' register ex officio.'</i>
Netherlands	<i>'The municipal records (GBA) registers all persons that live in a municipality. Electors that may be considered "lost" consist mostly of persons that have no permanent residence, or those who have left the municipality with an unknown destination. Persons without a permanent residence can however request a so called letterbox address (required if they want social benefits). Their voting card will be sent to the letterbox address. Registration with the municipality is stimulated by the fact that the municipality provides many services for citizens such as providing them with passports, ID-cards, social services etc. Exchanging information with other governmental databases provides updates.'</i>

13. GOVERNANCE, DATA SECURITY AND INFORMATION ASSURANCE.

Management of electoral registration is uniformly subject to privacy regulations.

According to our information only two of the sample group's electoral authorities are ISO 27001 certified.

As noted in Section 10, above, the sample group's electoral authorities, when data matching or data transferring, tend to use secure systems.

With the apparent exception of Australia, those countries which make available to their citizens online access to registration details require that the citizen uses a digital signature (Section 8 above).

Q: Please describe the data privacy / information assurance principles which your systems adhere to.	
Australia	The AEC seeks to comply with Information Privacy Principles 1 to 3 and 10 and 11 of the Privacy Act 1988. No information was available on security accreditations.
Canada	<p>The privacy of all information in the National Register of Electors is protected by the Canada Elections Act and the Privacy Act.</p> <p>Information in the National Register of Electors can be used only for electoral purposes.</p> <p>Electronic and procedural safeguards have been put in place to ensure the security of elector information.</p> <p>The Privacy Commissioner has the right, at any time, to audit how information for the National Register of Electors is collected, stored, updated and used to ensure that the elector's right to privacy is respected.</p> <p>Under the law, the voters list is shared with registered political parties that endorsed a candidate in the electoral district in the last election and members of the House of Commons each year, as well as with candidates during an electoral event. The information shared consists only of electors' names and addresses. By law, parties and members of the House of Commons may use this information for communicating with electors, such as in soliciting contributions and recruiting members. Every elector has the right to exclude his or her name from the National Register of Electors or to prevent the transfer of his or her name to the provinces or territories by writing to the Chief Electoral Officer in Ottawa.</p> <p>If an elector chooses not to be listed in the National Register of Electors, his or her right to vote is protected. However, at the time of a federal general election, by-election or referendum, such an elector will need to add his or her name to the voters list by registering at the local Elections Canada office in order to vote.</p> <p>ID based encryption is used, as well as registered couriers for the transfer of data-discs (CDs and DVDs). Secure FTPs are used for the transfer of files online, which are all encrypted.</p> <p>The register contains a unique, randomly generated identifier that is assigned by the CEO.</p>
Denmark	The local municipality has its own procedures, but must at all times comply with the Danish act on processing personal data. The Act on Processing of Personal Data (Act No. 429 of 31 May 2000) entered into force on 1 July 2000.
Estonia	The Population Register Act provides for the composition of data in the population register and the procedure for the introduction and maintenance of the population register, processing of data and access to data in the population register, entry of data on residence in the population register and exercise of supervision over the maintenance of the population register.
Finland	The government has issued several general guidelines and recommendations concerning administrative ICT systems. The Finnish information security system is ISO 27001 certified:
Germany	<p>Complaints concerning the violation of data protection rules or the freedom of information rules may be issued to the Commissioner for Data Protection and Freedom of Information of the respective federal state.</p> <p>The Commissioner offers advice on data protection matters to public bodies, companies and individuals. He also provides assistance and advice to individuals and to institutions that hold information.</p>
Netherlands	The levels of security and standards are based on the EU-privacy regulation. Many municipalities use the EG ISO 27001 norm but this is not a legal requirement.

14. HOW THE ELECTORAL REGISTER IS LINKED TO THE PROCESS OF VOTING

Q: How does the electoral register link to the process of voting? (Are voting cards issued? Is proof of identity required at the polling station?)	
Australia	No proof of identity or voter card is required; the voter asserts his or her own identity and the name and address are checked off by polling station staff against the roll.
Canada	Proof of identity is required whilst voting in person.
Denmark	Voting cards will automatically be sent to the relevant voters, who must identify themselves at the voting polls.
Estonia	A voting card will be issued to the voter, but is for information purposes only. There is no need to present proof of identity at the polling station. It should be noted that in Estonia it is possible to cast a vote electronically and even by SMS.
Finland	After the register of voters is established, a notification letter is sent to all voters to their home address that they have the right to vote in the coming elections, determined <i>ex officio</i> .
Germany	For postal voting, the voter will receive a polling card together with the ballot paper. The polling card contains an affidavit that has to be signed in person.
Netherlands	Dutch nationals of 18 years and older, eligible to vote, will receive a voting card for the parliamentary elections. Proof of identity will be asked in the polling station where the citizen must present an identity card and the voting card to the polling station staff before being allowed to cast this vote. The polling station staff will have to verify that the person voting is same person as mentioned on the voting card.

CONCLUSIONS

1. Some of the countries we surveyed put in place sophisticated systems long ago to enable them to capture details leading to a very complete and accurate electoral roll. Compared with these countries, the UK's system is overdue an overhaul, and EURIM welcomes the news that legislation is in preparation.
2. Compulsory registration does not in all cases yield registration rates notably above those achieved in countries without compulsory registration.
3. Proof of identity for registration purposes (although not for voting) is the norm, certainly in our second sample group.
4. Online access may not be a pressing objective today, but the government should recognise that in due course it will be expected as an option for an increasingly IT literate nation provided the security issues can be dealt with effectively.
5. When online registration is eventually implemented, use of digital certificates by the registering elector should be the norm.
6. Data matching or data sharing with other public bodies, online or offline, should be done securely, comply with data privacy laws, and be covered by formal agreements.
7. Where electoral data matching is done online, thought should be given as to how to secure the data.
8. Similarly, if data is shared offline by means of CD or memory stick, the government should apply lessons learnt in the numerous reviews conducted into data loss incidents in recent years.
9. The Government should consider the advantages or otherwise of data matching with private sector databases.
10. To encourage registration of expatriate electors, the government might consider using the Foreign and Commonwealth Office's consular facilities to encourage and facilitate registration overseas.
11. To improve the registration of 'lost' voters, the government might consider linking electoral registration to the application for benefits or to registration on other public databases.
12. Management of electoral data must comply with data privacy laws.
13. ISO 27001 should be adopted in as an information security management system standard.

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